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VALUATION OF UNPAID HELP BY SENIORS IN CANADA: AN EMPIRICAL ANALYSIS

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Abstract

The demographic shift towards an older population in Canada has led to concerns about the increased share of society's resources required to provide health care, social assistance, public pensions, housing, etc. for this group. Preoccupation with this problem, however, has obscured the fact that seniors actively contribute to society in many ways, not the least of which is the provision of substantial amounts of unpaid time contributions of various sorts. Using data from the 1992 GSS on Time Use (cycle 7), this paper estimates the amount and market value (at replacement cost) of unpaid help - both informal help to others and formal help to organizations - of individuals age 55 and over. Travel time in connection with unpaid help is also analyzed. We find that participation rates and average hours are higher in the informal help sector relative to the formal sector both by age and by gender. The estimates also show that the market value of these contributions is substantial, and that seniors contribute a disproportionate share of the value of unpaid help contributed by all individuals over the age of 25.

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INTRODUCTION

Recent literature has begun to place considerable emphasis on the importance of unpaid work in the economy, both in terms of how much and what kinds of unpaid activities are contributed by individuals, as well as the value of this work to society². The issue is addressed from a number of perspectives. In terms of national accounting, for example, researchers have advanced several arguments in support of valuing unpaid activities such as housework, childcare, volunteer work, etc., for inclusion in some broad index of economic activity (Statistics Canada 1995). On a more micro level, other researchers have approached the issue in the context of analyzing the pattern of the individual's productivity over the life cycle (eg. Stone 1994, Herzog and Morgan 1992, Herzog, Kahn et.al 1989). Regardless of the perspective, however, the underlying premise in this literature is the same. What is counted and measured as productive economic activity should not be restricted to paid work alone. Unpaid work also represents a major use of resources with both private and social benefits and costs. Without community and organizational volunteering, for example, most countries would need much larger public sectors or would lose considerable charitable, cultural and educational activities (Freeman 1996). Without informal caregiving to friends, neighbours and relatives, increasingly scarce health dollars would have to be channeled into publically provided caregiving (White-Means and Chollett 1996, Max, Webber and Fox 1995).

The focus of this present study is an evaluation of the unpaid contributions provided by Canadian seniors -- defined as persons aged 55 and over³. Defining contributions in the broader context of unpaid, as well as paid work allows us to view individuals as being "productive" and making economically valuable contributions to society even if they do not

² For an excellent bibliography of this literature, see Statistics Canada, 1995.

³ We recognize that the definition of "seniors" is somewhat arbitrary. Although the norm has been 65+ -- the age at which individuals traditionally retired -- the trend towards early retirement challenges the use of this cut-off. In the GSS data used in this paper, for example, only 31.8% of the males and 14.4% of the females age 55+ were still participating in the labour market.

participate in the paid labour force at all, or after they retire from the paid labour force. This latter perspective is an important one. Given the demographic shift towards an older population in Canada, there are concerns about the increased resources (health care, social assistance, public pensions, etc.) that will be required for this age group in the near future. Focussing only on what seniors are going to require from society, however, obscures the fact that many seniors are quite actively contributing to society in various ways. Given this perspective, the emphasis in the paper is not on unpaid work in general, which would include unpaid work for one's self (eg. housework), but rather on a subset of unpaid work activities -- unpaid help to others. We define this in more detail below, but in essence, unpaid help to others involves assistance that is provided to family, friends and community, which might otherwise have to be purchased in the market. In the case of family, we distinguish between help within the immediate family unit (eg. care for spouses and/or one's own young children) which we exclude from the analysis, and help between family generations (eg. care for grandchildren and care for elderly parents by adult children) and to other relatives, which we do include. We have omitted the former on the basis that the nature of the spousal and parent-young child relationships are such that the element of voluntarism is not the same here as in the broader family context.

We make a further distinction in the analysis between "formal" help, which is provided to organizations or community groups, and "informal" help which is provided to family, friends, or neighbours. Increasingly, this distinction is being recognized as an important one (Statistics Canada 1995; Stone 1994; Herzog and Morgan 1992; Lapierre 1992; Ross 1990; Herzog, Kahn et.al 1989) and failing to account for the informal unpaid help sector seriously underestimates the value of unpaid contributions to society (Ross 1990). From an empirical perspective, however, we note that while there have been estimates of the hours of formal volunteer work in Canada (eg. Ross 1990) and estimates of formal and informal unpaid help combined (eg. Frederick 1995; Statistics Canada 1995,1992; Paille 1994), there appear to be no published estimates of the allocation of time to informal and formal help separately. This paper attempts to fill this gap.

In addition to identifying the pattern and amount of unpaid help hours provided by

seniors, the paper also attempts to estimate the market value of this contribution. While this may appear to be a reasonably straightforward task, we note that recent literature has underscored the point that there are some very important methodological issues in this area (Joshi et al. 1997; Statistics Canada 1995). Distinctions between volunteer work and unpaid work, what should be counted as an unpaid time contribution, and how the contribution should be quantified and valued, are all questions which need to be addressed within a conceptual framework. Many of these issues, moreover, are relevant in the context of the present paper. In estimating the amount of unpaid help, for example, should we count all the recorded hours, or should we adjust the total to take account only of those hours which provide unambiguously positive benefit to the recipient on the assumption that only the hours yielding positive benefit would actually be purchased in the market? In valuing these contributions, moreover, should we use a market replacement or an opportunity cost methodology, and can either of these capture the value of a service provided by a loved one as opposed to a stranger?

Unfortunately, in the time use data employed in this study, there is no information which would allow us to "net out" hours that, in a theoretical sense, should not be counted⁴. Hence, we report only the "gross" hours which we acknowledge are likely to be an overestimate. With respect to the valuation of unpaid hours, however, recent excellent analysis by Statistics Canada does address many of the methodological issues in this area, which allows us to value the hours in a more disaggregated and rigorous way than was previously possible (Statistics Canada 1995).

DATA

The data on participation rates and hours of unpaid time contributions for this study are taken from the 1992 General Social Survey (GSS) - Cycle 7: Time Use. The sample size is 8,996 representing a population of 21,294,000 ages 15 yrs and older. As indicated in the Introduction, the focus of the study is unpaid help to others, both formal and informal,

⁴ A yet unpublished survey from the 1995 GSS (CYCLE 11: Social and Community Support) does have some questions which will, perhaps, allow a better estimate of unpaid caregiving than do the currently available data.

performed by seniors in Canada -- defined as persons aged 55 and over. Estimates of unpaid help by younger adults aged 25-54 are presented for comparison purposes. In this analysis, informal help has been defined as (i) caregiving by seniors within the household to household children (eg. grandchildren); and (ii) unpaid help to friends, neighbours and relatives outside the household. Formal help has been defined as religious or organizational volunteer work. We have also included the travel time (in hours) associated with providing both informal and formal unpaid help. The sub-groups of these categories are listed in Appendix A. We note that the category unpaid caregiving within the household is not applicable to the younger age group (25-54) as it consists of care to household children who, in the absence of any information to the contrary, are assumed to be their own. As indicated earlier, this does not, therefore, fit our category of unpaid help to others and has been excluded⁵.

The hours spent in unpaid help are provided by time diary data which records the time spent per day on each activity: the actual start and finish times for each activity are recorded. We note that the 1992 GSS represents an improvement over earlier time diary data (eg. 1986 and 1981) in two important ways ; (i) the coding of diary activities was expanded to 167 activities (relative to 96 in 1986, for example); and (ii) the 1992 data were collected monthly throughout the year to account for seasonal variations in activity. The data collection was from January to December, with an equal proportion of interviews collected over a one week period in each month. We note further, that the 1992 GSS also provides stylized (recall) data on time spent in selected unpaid activities over the previous week or month. These estimates are not analyzed here, however, as the general consensus in the literature is that diary estimates are more reliable measures of time use (see Paille, 1994; Juster and Stafford, 1991). The major problem with recall data is that activities which occur infrequently are overestimated, while those that take place frequently are underestimated.

⁵ We note that the "caregiving within the household" category in the GSS does have four questions related to care of household adults. The difficulty is, however, that we are unable to distinguish whether this care was for a senior parent, for example, which we would want to count, as opposed to care for a spouse, which we would not want to count. We did not, therefore, include these hours.

The valuation of the hours is based on market replacement cost, and is calculated using hourly wage rates developed by Statistics Canada for each type of unpaid activity (see Statistics Canada, 1995). In their analysis, activity codes for unpaid work from the General Social Survey for 1992, 1986 and 1981 were matched with similar occupations from the market, so that an hourly wage rate could be inputted⁶. The unpaid help activities, matching occupations, and inputted wages used in this paper are listed in Appendix B. Although Statistics Canada also developed a methodology whereby the unpaid time could be evaluated at opportunity cost, this approach was not used in this study because it is based primarily on the market wage, and the majority of seniors are retired from the paid labour force.

PARTICIPATION RATES IN UNPAID HELP BY GENDER AND SELECTED AGE GROUPS:

Table 1 shows the percent distribution of the Canadian population, by age and gender. It can be seen that, in 1992, seniors (aged 55 and over) constituted 30.6% of the population 25 years of age and over. Female seniors represented 32.5% of females, and male seniors represented 28.7% of males. Table 2 presents the participation rates in unpaid help, by gender and age. As indicated in the notes to the table, these rates are the proportions of individuals in the population who participated in an unpaid help activity on the diary day.

Focussing first on gender specific aspects, we note that the participation rate in unpaid help for the 25-54 years group was 12.9% for women versus 10.8% for men. For seniors as well, the participation rate for females is higher than for males in all age categories except 70+. For seniors as a group (age 55+), however, the male and female participation rates are identical at 18.7%. Looking at the participation behaviour by age, it can be seen that, overall, seniors of either gender participate more in unpaid help than younger individuals -- almost 8

⁶ This is referred to (by Statistics Canada) as the "specialist" variant of market replacement cost. There is also a "generalist" variant of replacement cost whereby most of the types of unpaid work are matched to the single wage rate for the aggregate category 'personal service occupations', although child care and volunteer activities are matched to the same occupations as in the specialist variant and costed accordingly.

percentage points higher in the case of male seniors relative to the 25-54 year olds, and almost 6 percentage points higher in the case of females. Within the seniors' group, the participation rates are reasonably constant between ages 55 and 69, but take a sharp drop for ages 70 and over. Table 3 shows the participation rates in a more disaggregated fashion. As well as the age and gender breakdown, we report types of activities including formal and informal help and travel time associated with help. From this table, we see that the participation rates for males as compared to females in informal unpaid help are very similar for seniors at 11.6% and 11.3% respectively, and also for the younger age group (7.3% and 7.5% respectively). In looking at the individual categories of informal work, moreover, it is category B, "unpaid help to individuals outside the household" that accounts for the bulk of the participation in informal unpaid help by seniors. Participation in caregiving within the household (category A) is low, probably reflecting the fact that the proportion of seniors who live with their adult children (and hence have access to grandchildren within the household) is quite small in this sample (15.8%).

Participation in formal, organizational volunteer activity (category C) is lower, relative to informal unpaid help both for seniors and non-seniors. Unlike what was found for informal unpaid help, moreover, the female participation rates are higher than the males' for all ages, being almost twice as high in the case of the 25-54 year olds. We note too, that the number of people who travel in connection with informal or formal work (category D) is also significant; 10.2% for male seniors and 9.5% for female seniors with both rates being higher than for the younger age groups.

Overall, as in Table 2 (all help), seniors show more activity in both formal and informal help as well as in travel relative to the younger age group. Comparing the rates of the age groups 55+ and 25-54, it appears that seniors are almost twice as likely to be involved in formal help, while about one and one-half times as likely to engage in informal help.

In summary, participation rates for both young and old are higher in informal versus formal unpaid help. While males and females appear to participate equally in informal help, moreover, females participate significantly more than males in formal unpaid work. Male and female seniors also have similar, and not insignificant participation rates in travel associated

with unpaid help. And finally, seniors show more activity in both formal and informal help as well as travel, relative to younger individuals.

AVERAGE HOURS IN UNPAID HELP ACTIVITIES:

Tables 4 and 5 report average hours in unpaid help for respondents providing unpaid help only (Table 4) and for all individuals in the population respectively (Table 5). The time allocated is shown for males and females and for formal and informal help as well as for travel time. It is worth pointing out that for purposes of providing a clearer picture of those who have actually done the activity, the average hours reported for the participants only (Table 4) are average daily hours, whereas the data for the population as a whole - on which the market value estimate is based - are average annual hours.

From these tables, a number of interesting points emerge: 1) With the exception of unpaid help within the household, male seniors who participate in unpaid help activities provide more hours than do females. Overall, for example, they provide 2.74 hours per day relative to 2.41 hours for female seniors. For the overall 25-54 years group, however, females average slightly more hours than do the males (2.18 hours per day versus 2.08). Both these overall patterns hold when the hours are averaged over all individuals as opposed to just over participants. 2) Comparing the age groups 55+ and 25-54, male seniors who participate in unpaid help contribute more average hours than do younger males in all categories, and female seniors contribute more than younger females in all categories except C -- volunteer work for organizations. Averaging over all individuals, however, both male and female seniors contribute more average annual hours of unpaid help than do the younger age groups in all categories. 3) Both Tables 4 and 5 show the importance of the distinction between formal and informal unpaid help and the relative volume of the latter. For example, table 5 shows that the highest average hours are in informal unpaid help to family, friends and relatives outside the household (category B). This applies to both males and females, young and old. Within category B, housework and cooking assistance, unpaid baby sitting, transportation assistance and other unpaid help were important for females. Home maintenance repair assistance, unpaid baby sitting, transportation assistance, care for disabled or ill individuals, farm or business,

and other unpaid help were important for males. Within category C, the largest user of time for both men and women is volunteer work in organizations⁷. 4) In terms of annual total hours in all unpaid help activities, female seniors provide slightly more hours than do male seniors (479,815,002 versus 454,339,949). With respect to the total annual hours of all individuals 25 years of age and over, moreover, seniors provide 45.4% of these hours.

We conclude from the above that the distinction between informal and formal unpaid help is a useful one, and failing to account for the informal sector would seriously underestimate the amount of unpaid assistance provided to the economy by individuals. Considering the two sectors together, moreover, it can be seen that seniors provide a disproportionate share - 45.4% - of the total assistance while making up only 30.6% of the population of individuals aged 25 and over.

It is worth noting that while the estimates presented here are not precisely comparable to previous estimates, nevertheless, such comparisons as are possible suggest that they are consistent with earlier work. For example, estimates from the same time use survey by Statistics Canada (1992) for retired individuals can be roughly compared to our estimates for seniors. Recognizing that the age groups are different and that the unpaid time measure is somewhat different (Statistics Canada includes civic activities as well as the aggregate of formal and informal unpaid time, for example), their estimates of 188 minutes per day for males and 150 minutes per day for females are not far off our estimates of 164 minutes and 145 minutes respectively.

The only other comparison we can make is to the work by Ross (1990) on volunteering to formal organizations based on recall data for 1987. As we have noted earlier, recall data often gives somewhat different results from time diary data. Ross mostly reports on hours per volunteer for those who volunteered at any time during the year. These estimates cannot be compared to ours since the group covered (participants during the time diary day) are quite different. However, for the population as a whole (all ages, both sexes) he reports a

⁷ The tables on which these conclusions are based are not presented but are available from the authors on request.

participation rate which allows one to calculate estimates of volunteer activity on a per capita basis which we can compare to our population based estimates. When we do this calculation for the Ross estimate, we calculate 51 hours of volunteering to formal organizations per person per year. Since this is for all ages, the natural comparison for us is to our broadest age categories (25 to 54 and 55+). Our most comparable estimates then, are: ages 25-54; males 18 hours, females 35 hours; ages 55+; males 52 hours, females 55 hours. We note that the differences between the estimates are in the direction anticipated by critics of recall data; activities that occur infrequently are overestimated. This seems to fit here.

THE MARKET VALUE OF UNPAID HELP ACTIVITIES:

Table 6 indicates the market value of the various unpaid help activities for 1992. Again, we provide separate estimates for the different categories of help. Table 6 corresponds to Table 4 and in the left half of the table provides estimates for those providing the unpaid help. The occupational codes and wage rates to which the activities have been matched are shown in Appendix B. The totals have been calculated including and excluding travel time associated with both formal and informal help activities. While a case can be made that travel or commuting time is not always paid for in the market economy and so should be excluded in a valuation based on replacement cost, it is clear that at least some of this time should be evaluated. Driving a friend to the airport, for example, has a market alternative in the sense that the friend could have taken a bus or an airport taxi. Driving across town to provide medical help to a sick friend should also be included if the cost for the services of a paid caregiver covers travelling time, and not just the time spent in the recipient's home. Because we are unable to separate out (in the data) the kinds of travel time that should be evaluated from those that should not, however, we simply present the two calculations.

Looking at Table 7 which corresponds to Table 5 and provides information for all respondents, it can be seen that, on a per senior basis, the average male senior contributes a value of \$2073 per year in help activities and the average female \$1857 per year including travel time (or \$1689 and \$1650 exclusive of travel time). Focussing on age, moreover, the

average male aged 25-54 contributes only 42% of the market value (including travel time) contributed by male seniors while the average female aged 25-54 contributes only 63% of the market value contributed by female seniors. The table also highlights an interesting point with respect to the relative market value of formal versus informal unpaid help in the economy. In the case of the average female senior, for example, although she spends only 62.5% as much time in formal versus informal unpaid help per year (55 hours versus 88 hours), the market value of the formal help is 93.7% of the market value of the informal unpaid assistance. While not as dramatic, a similar pattern exists for senior males - 53.1% versus 77.4%. In other words, while there is a greater volume of informal unpaid help provided in the economy, it is valued less in the market (in terms of replacement cost) than is the formal, organizational unpaid help.

Both Tables 6 and 7 report that the total market value of unpaid help contributions in 1992 by seniors aged 55+ was approximately ten and one-half billion dollars if we include travel time, and approximately nine billion dollars if we exclude it. Female seniors contributed 51.8% and 53.6% of these totals respectively. Calculated as a percentage of the unpaid help contributions of all individuals aged 25+, seniors contributed 45.9% of the market value including travel time and 45.5% of the market value excluding travel time. With and without travel time, moreover, seniors' unpaid help constituted 1.5% and 1.3% respectively of the 1992 GDP; 2.7% and 2.4% respectively of wages, salaries and supplementary labour income in 1992; and 2.5% and 2.1% respectively of consumer expenditure on goods and services⁸.

We note, finally, that the value of the unpaid help provided by individuals 65 years and over is approximately five and one-half billions including travel time and approximately four billion, seven hundred million excluding it. Calculated as a percentage of Old Age Security (OAS) and Guaranteed Income Supplement (GIS) payments in 1992, this market value

⁸ For 1992, the GDP was \$684.713 billions; Wages, Salaries and Supplementary labour income was \$388.916 billions; and Consumer Expenditure on Goods and Services was \$423.055 billions. Source: Economic and Fiscal Reference Tables, Department of Finance, 1994.

represents 29.3% and 25.2% respectively⁹. In other words, seniors aged 65 and over returned at least one-quarter of what they received in public pensions in the form of unpaid assistance to others.

SUMMARY AND CONCLUSIONS

In this paper, we have considered the amount and value of unpaid help to others provided by seniors. We have included in this estimate not only the formal "volunteer" work to organizations, but also the informal assistance provided to family, friends and neighbours both inside and outside the household. The paper builds on earlier analyses which estimate and value only the formal unpaid help (eg. Ross 1990), or provide estimates of informal and unpaid help combined (eg. Statistics Canada 1992).

The data clearly show that the seniors are active in the area of unpaid help, and the average senior provides more unpaid assistance than younger individuals. Much of this assistance, moreover, is provided informally rather than formally, although in terms of market value, it appears to be the formal help which seems to have the higher replacement cost in the economy. Overall, the market value of the unpaid assistance (including travel time) of seniors aged 55+ is significant at ten and one-half billion dollars or 1.5% of GDP in 1992.

Looking at seniors 65+, moreover, it can be seen that they provide anywhere between 25 and 30% of their public pension payments to the economy in the form of unpaid assistance. Seniors are clearly contributing benefits to, as well as receiving benefits from society. In an era where deficit-reduction ideology has resulted in substantial cuts to the provision of public services, moreover, the demand for the kind of unpaid help provided by Canadian seniors is likely to increase significantly.

⁹ For data on OAS and GIS payments, see The National Finances, 1992.

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TABLES

Table 1 Percent distribution of Canadians aged 25 and over by age, males and females, 1992

Age group	Column percent based on weighted counts ¹		
	Males	Females	Males and females
25-29	13.4	12.5	13.0
30-34	14.3	13.6	13.9
35-39	13.4	12.9	13.2
40-44	12.1	11.5	11.8
45-49	10.3	9.6	9.9
50-54	7.8	7.4	7.6
55-59	7.2	6.9	7.0
60-64	6.6	6.7	6.6
65-69	5.8	6.3	6.0
70-74	4.7	6.1	5.5
75 +	4.4	6.5	5.5
Total count	8,493,000	9,021,000	17,514,000

1. Weighted from sample by 'timewgt'. According to Statistics Canada guidelines (The 1992 GSS Public Use Microdata File Documentation and User's Guide, pp.20-21), all weighted totals have been rounded to the nearest thousand.

Source: Public Use Microdata Summary File, The 1992 General Social Survey - Cycle 7: Time Use.
Sample size: 8,996.

Table 2 Participation rates^{1,2,3} in unpaid help, males and females, selected age groups, 1992

Age group	Participation rate (%) in unpaid help		
	Male	Female	Males and females
25-54	10.8	12.9	11.9
55 +	18.7	18.7	18.7
55-59	20.1	21.3	20.7
60-64	20.3	21.4	20.9
65-69	21.3	22.8	22.1
70 +	14.6	13.7	14.1

1. A respondent is considered a provider of unpaid help if he/she provided any of the unpaid help in Category A, B, C or D. These activities are A - unpaid caregiving by seniors within the household (200, 210, 220, 230, 240, 250, 260, 281 & 291, for those aged 55 & over only); B - unpaid help outside the household: assistance to other adults (671, 672, 673, 674, 675, 676, 677 & 678); C - organizational voluntary activities (620, 630, 660 & 800); D - travel related to unpaid help activities (691 & 892).

2. Sample was weighted using 'timewgt'.

3. Participation rates are defined as the proportion of the population that reported spending some time on the activity on diary day.

Source: Public Use Microdata Summary File, The 1992 General Social Survey - Cycle 7: Time Use.

Sample size: 8,996; Population (weighted from sample by 'timewgt'): 21,294,000.

Table 3 Participation rates^{1,2} in unpaid help within the household (Activity A), unpaid help outside the household (Activity B), organizational voluntary activities (Activity C), and travel related to unpaid help activities (Activity D), males and females, selected age groups, 1992

Age group	Participation rate (%) in unpaid help									
	Informal help						Formal help		Travel time for formal and informal help	
	Activity A		Activity B		Total		Activity C		Activity D	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
25-54	-	-	7.3	7.5	7.3	7.5	2.2	4.3	6.1	7.0
55+	2.0	1.2*	9.8	10.2	11.6	11.3	5.2	7.0	10.2	9.5
55-59	-	-	8.0	13.1	12.5	15.0	6.8*	5.7	9.8	9.2
60-64	-	-	13.9	12.9	15.6	14.8	2.0*	6.4	10.9	11.8
65-69	-	-	10.3	11.0	10.8	12.7	5.7*	11.9	17.4	10.6
70 +	-	-	8.0	6.7	8.5	6.7	5.9	5.6	5.5	7.9

1. Sample was weighted using 'timewgt'.

2. A respondent is considered a provider of help A (B, C, or D) if he/she provided any type of the unpaid help in Category A (B, C, or D). These activities are A - unpaid caregiving by seniors within the household (200, 210, 220, 230, 240, 250, 260, 281 & 291, for those aged 55 & over only); B - unpaid help outside the household: assistance to other adults (671, 672, 673, 674, 675, 676, 677 & 678); C - organizational voluntary activities (620, 630, 660 & 800); D - travel related to unpaid help activities (691 & 892).

* These estimates should be interpreted with caution due to small cell sizes.

Source: Public Use Microdata Summary File, The 1992 General Social Survey - Cycle 7: Time Use.

Sample size: 8,996; Population (weighted from sample by 'timewgt'): 21,294,000.

Table 4: Daily hours in unpaid help activities¹, males and females, selected age groups, respondents providing unpaid help, 1992

Age group	Average hours per person per day in unpaid help activities										Sum of annual totals for population in all unpaid help activities		
	Informal help				Formal help		Travel for formal & informal help		Total ³				
	A ²		B ²		C ²		D ²						
	M	F	M	F	M	F	M	F	M	F	M	F	M & F
25-54	-	-	1.89	1.97	2.17	2.23	0.63	0.50	2.08	2.18	497,036,261	624,542,873	1,121,579,134
55+	0.82	1.82*	2.58	2.16	2.74	2.16	0.97	0.61	2.74	2.41	454,339,949	479,815,002	934,154,951
55-59	-	-	2.56	2.72	1.97*	2.54	0.87	1.01	2.31	3.10	103,039,157	149,812,912	252,852,069
60-64	-	-	2.02	2.02	4.45*	2.29	0.90	0.49	2.39	2.21	99,451,299	103,557,932	203,009,231
65-69	-	-	3.94	2.33	1.73*	2.16	1.08	0.61	3.24	2.65	123,805,310	124,972,016	248,777,326
70 +	-	-	2.21	1.57	3.62	1.87	1.02	0.44	3.09	1.78	128,044,183	101,472,142	229,516,325

1. These activities are A - unpaid caregiving by seniors within the household (200, 210, 220, 230, 240, 250, 260, 281 & 291, for those aged 55 & over only); B - unpaid help outside the household: assistance to other adults (671,672, 673, 674, 675, 676, 677 & 678); C - organizational voluntary activities (620, 630, 660 & 800); D - travel related to unpaid help activities (691 & 892).

2. Averages in any of these columns were calculated over respondents providing unpaid help in the corresponding category.

3. This column is not the sum of columns A through D. It is calculated for those who provided unpaid help in any one of these categories.

* These estimates should be interpreted with caution due to small cell sizes.

Source: Public Use Microdata Summary File, 1992 General Social Survey - Cycle 7: Time Use. Sample size = 8,996; Population (weighted from sample by 'timewgt') = 21,294,000.

Table 5 Annual hours in unpaid help activities¹, males and females, selected age groups, all respondents, 1992

Age group	Average hours per person per year in unpaid help activities										Sum of annual totals for population in all unpaid help activities		
	Informal help				Formal help		Travel for informal & formal help		Total				
	A		B		C		D						
	M	F	M	F	M	F	M	F	M	F	M	F	M & F
25-54	-	-	51	54	18	35	14	13	82	102	497,036,261	624,542,873	1,121,579,134
55+	6	8*	92	80	52	55	36	21	186	164	454,339,949	479,815,002	934,154,951
55-59	-	-	75	131	49*	53	31	34	170	241	103,039,157	149,812,912	252,852,069
60-64	-	-	102	95	33*	54	36	21	177	172	99,451,299	103,557,932	203,009,231
65-69	-	-	148	93	36*	93	68	24	252	221	123,805,310	124,972,016	248,777,326
70 +	-	-	64	38	77	38	20	13	165	89	128,044,183	101,472,142	229,516,325

1. These activities are A - unpaid caregiving by seniors within the household (200, 210, 220, 230, 240, 250, 260, 281 & 291, for those aged 55 & over only); B - unpaid help outside the household: assistance to other adults (671,672, 673, 674, 675, 676, 677 & 678); C - organizational voluntary activities (620, 630, 660 & 800); D - travel related to unpaid help activities (691 & 892).

* These estimates should be interpreted with caution due to small cell sizes.

Source: Public Use Microdata Summary File, 1992 General Social Survey - Cycle 7: Time Use. Sample size = 8,996; Population (weighted from sample by 'timewgt') = 21,294,000.

Table 6 Evaluating market value of unpaid help activities¹, males and females, selected age groups, respondents providing unpaid help only, 1992

Age group	Average dollar amount per person per year in unpaid help activities										Sum of annual totals for population in all unpaid help activities			
	Informal help				Formal help		Travel for informal & formal help		Total ³					
	A ²		B ²		C ²		D ²							
	M	F	M	F	M	F	M	F	M	F	Including Category D		Excluding Category D	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
25-54	-	-	6,681	6,945	11,155	11,803	2,251	1,794	8,080	9,025	5,289,251,750	7,089,425,021	4,455,535,168	6,319,942,324
55+	3,714	6,665*	9,110	7,633	14,458	11,425	3,507	2,185	11,113	9,956	5,052,036,760	5,433,817,349	4,178,816,643	4,827,970,092
65+	3,383	6,319*	10,536	6,744	15,319	10,667	3,803	1,833	12,902	9,332	2,817,171,910	2,659,344,696	2,329,846,684	2,384,951,842
55-59	-	-	9,028	9,607	10,443*	13,465	3,140	3,633	9,553	12,104	1,167,424,988	1,602,174,902	980,071,009	1,395,029,275
60-64	-	-	7,106	7,140	23,550*	12,116	3,244	1,761	9,360	9,129	1,067,439,862	1,172,297,751	868,898,950	1,047,988,975
65-69	-	-	13,905	8,212	8,997*	11,416	3,869	2,196	12,246	11,369	1,282,619,172	1,468,771,699	952,438,766	1,336,896,916
70 +	-	-	7,801	5,549	19,165	9,874	3,672	1,590	13,506	7,643	1,534,552,738	1,190,572,997	1,377,407,918	1,048,054,926

1. These activities are A - unpaid caregiving by seniors within the household (200, 210, 220, 230, 240, 250, 260, 281 & 291, for those aged 55 & over only); B - unpaid help outside the household: assistance to other adults (671,672, 673, 674, 675, 676, 677 & 678); C - organizational voluntary activities (620, 630, 660 & 800); D - travel related to organizational voluntary activities (691 & 892).

2. Averages in any of these columns were calculated over respondents providing unpaid help in the corresponding category.

3. This column is not the sum of columns A through D. It is calculated for those who provided unpaid help in any one of these categories.

* These estimates should be interpreted with caution due to small cell sizes.

Source: Public Use Microdata Summary File, 1992 General Social Survey - Cycle 7: Time Use. Sample size = 8,996; Population (weighted from sample by 'timewgt') = 21,294,000.

Table 7 Evaluating market value of unpaid help activities¹, males and females, selected age groups, all respondents, 1992

Age group	Average dollar amount per person per year in unpaid help activities										Sum of annual totals for population in all unpaid help activities			
	Informal help				Formal help		Travel for informal & formal help		Total					
	A		B		C		D				Including Category D		Excluding Category D	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
25-54	-	-	489	524	247	513	138	126	873	1,163	5,289,251,750	7,089,425,021	4,455,535,168	6,319,942,324
55+	73	77*	893	775	748	798	358	207	2,073	1,857	5,052,036,760	5,433,817,349	4,178,816,643	4,827,970,092
65+	18	36*	934	547	886	816	384	161	2,221	1,560	2,817,171,910	2,659,344,696	2,329,846,684	2,384,951,842
55-59	-	-	722	1,263	712*	765	308	334	1,921	2,581	1,167,424,988	1,602,174,902	980,071,009	1,395,029,275
60-64	-	-	988	918	477*	781	354	207	1,903	1,952	1,067,439,862	1,172,297,751	868,898,950	1,047,988,975
65-69	-	-	1,427	901	509*	1,354	673	233	2,614	2,596	1,282,619,172	1,468,771,699	952,438,766	1,336,896,916
70 +	-	-	622	372	1,124	549	202	125	1,973	1,046	1,534,552,738	1,190,572,997	1,377,407,918	1,048,054,926

1. These activities are A - unpaid caregiving by seniors within the household (200, 210, 220, 230, 240, 250, 260, 281 & 291, for those aged 55 & over only); B - unpaid help outside the household: assistance to other adults (671,672, 673, 674, 675, 676, 677 & 678); C - organizational voluntary activities (620, 630, 660 & 800); D - travel related to organizational voluntary activities (691 & 892).

* These estimates should be interpreted with caution due to small cell sizes.

Source: Public Use Microdata Summary File, 1992 General Social Survey - Cycle 7: Time Use. Sample size = 8,996; Population (weighted from sample by 'timewgt') = 21,294,000.

APPENDIX A

ACTIVITY CODES FOR UNPAID HELP

A: UNPAID CAREGIVING WITHIN THE HOUSEHOLD (INFORMAL)

200 - Baby Care - Household Child
210 - Child Care - Household Child
220 - Helping/Teaching Reprimanding
230 - Reading/Talking /Conversation With Child
240 - Play with Children
250 - Medical Care - Household Child
260 - Unpaid Babysitting
281 - Other Child Care
291 - Travel: Household Child

B: UNPAID CAREGIVING OUTSIDE THE HOUSEHOLD (INFORMAL)

671 - Housework and Cooking Assistance
672 - House Maintenance and Repair Assistance
673 - Unpaid Babysitting
674 - Transportation Assistance
675 - Care for Disabled or Ill
676 - Correspondence Assistance
677 - Unpaid Help for a Business or Farm
678 - Other Unpaid Work

C: ORGANIZATIONAL VOLUNTARY ACTIVITIES (FORMAL)

620 - Child, Youth, Family Organization
630 - Religious Meetings, Organizations
660 - Volunteer Work (Organizations)
800 - Coaching

D: TRAVEL ASSOCIATED WITH FORMAL AND INFORMAL HELP

691 - Travel: Civic and Voluntary Activity
892 - Travel: Coaching

APPENDIX B

GSS ACTIVITY CODES	OCCUPATIONAL CLASSIFICATIONS	IMPUTED COSTS
A: UNPAID CAREGIVING WITHIN THE HOUSEHOLD		
Baby Care Child Care	Physical Care - Children (Babysitter)	\$ 7.85/hr
Helping/Teaching/Reprimanding Children Reading, Talking and Conversation with Children	Education - Children (Elementary and Kindergarten teachers)	\$ 21.34
Medical Care - Household Child	Medical Care - Children (Nursing Assistants)	\$ 13.10
Play with Children Unpaid Babysitting Help and Other Care-Household Children	Other Care - Children (Babysitter)	\$ 7.85
Travel - Household Child	Transport - Children (Taxi Drivers)	\$ 9.86
B: UNPAID CAREGIVING OUTSIDE THE HOUSEHOLD		
Housework and Cooking Assistance House Maintenance and Repair Assistance Unpaid Babysitting Transportation Assistance Care for Disabled or Ill Correspondence Assistance Other Unpaid Help	Other Help and Care (Personal Service Occupations)	\$ 9.66
C: ORGANIZATIONAL VOLUNTARY ACTIVITIES		
Volunteer Work Child, Youth and Family Organizations Religious Meetings, Organizations Coaching	Volunteer Work (Occupations in Welfare and Community Service)	\$ 14.50
D: TRAVEL ASSOCIATED WITH FORMAL AND INFORMAL HELP		
Travel: Civic and Voluntary Activity Travel: Coaching	Transport - Other Unpaid Work (Taxi Drivers)	\$ 9.86

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